

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

<b>In re Application of:</b>	<b>Brian J. Brown, Michael Davis, David Friesen, Timothy J. Ley and Sean Skubitz</b>
<b>Application No.:</b>	<b>10/800572</b>
<b>Filed:</b>	<b>March 15, 2004</b>
<b>For:</b>	<b>Improved Longitudinally Flexible Expandable Stent</b>
<b>Examiner:</b>	<b>Vy Q. Bui</b>
<b>Group Art Unit:</b>	<b>3773</b>

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Docket No.: S63.2N-6769-US05**

**APPEAL BRIEF**

This is an Appeal Brief for the above-identified application, in which pending claims 38 – 40, 44, and 45 were rejected in a Final Office Action dated May 28, 2008.

A Notice of Appeal was filed in this case on July 28, 2008. The fee required for submitting this Appeal Brief under 37 C.F.R. § 41.20(b) is addressed in a concurrently filed transmittal letter. The Commissioner is authorized to charge Deposit Account No. 22-0350 for any other fees that may be due with this Appeal.

**(i) Real Party in Interest**

The Application is assigned to Boston Scientific Scimed, Inc., formerly known as Scimed Life Systems, Inc., One SciMed Place, Maple Grove, Minnesota 55311-1566, a Minnesota corporation and a subsidiary of Boston Scientific Corporation, One Boston Scientific Place, Natick, Massachusetts 01760-1537, a Delaware Corporation.

**(ii) Related Appeals and Interferences**

There are no related appeals or interferences that will directly affect or be affected by or have a bearing on the Board's decision in the pending appeal.

**(iii) Status of the Claims**

Applicants canceled claim 42 in an Amendment Filed On or After the Date of Filing an Appeal Brief, filed concurrently herewith. As such, claims 38 – 41, and 43 – 45 are pending in this application.

Claims 41 and 43 were withdrawn from consideration during prosecution.

Claims 38 – 40, 44, and 45 were finally rejected and are the subject of this Appeal.

**(iv) Status of Amendments**

Applicants filed a Response After Final and Request For Reconsideration on June 17, 2008. The Office considered the Response, but stated that it did not place the application in condition for allowance.

Applicants have filed concurrently herewith an Amendment Filed On or After the Date of Filing an Appeal Brief, canceling claim 42.

**(v) Summary of Claimed Subject Matter**

A summary of the representative independent claim, as required by 37 C.F.R. § 41.37(c)(1)(v), and a non-limiting listing of locations where support may be found [bracket citations] is provided as follows:

Claim 38 is directed to a stent comprising a stent body expandable between an un-deployed orientation and a deployed orientation. [FIG. 3; page 1, lines 17 – 18]. The stent body has a longitudinal axis extending between first and second open ends. [FIG. 3; page 4, lines 19 – 20]. The stent body has a plurality of adjacent circumferential support structures being spaced-apart along the longitudinal axis. [FIGs. 5a and 5b]. Each support structure including longitudinal struts being interconnected at apex portions. [FIGs. 5a and 5b]. The longitudinal struts and apex portions define an undulating pattern. [FIGs. 5a and 5b]. At least some of the apex portions of adjacent circumferential support structures are configured to longitudinally overlap one another when in the un-deployed configuration. [FIGs. 5a and 5b]. A plurality of circumferential connecting struts interconnects at least some of the adjacent circumferential support structures. [FIGs. 5a and 5b]. The circumferential connecting struts extend between the apex portions that overlap one another. [FIGs. 5a and 5b].

Claim 39 is directed to the stent of claim 38 wherein in the deployed orientation, adjacent circumferential support structures are offset such that the apex portions on one side of a support structure are positioned intermediate the apex portions on a facing side of an adjacent support structure. [FIG. 14; page 2, line 30 – page 3, line 3; page 8, lines 27 – 31].

Claim 45 is directed to a stent comprising a stent body expandable between an un-deployed orientation and a deployed orientation. [FIG. 3; page 1, lines 17 – 18]. The stent body has a longitudinal axis extending between first and second open ends. [FIG. 3; page 4, lines 19 –

20]. The stent body has a plurality of adjacent circumferential support structures spaced-apart along the longitudinal axis. [FIGs. 5a and 5b]. Each support structure includes longitudinal struts interconnected at apex portions, the longitudinal struts and apex portions defining an undulating pattern. [FIGs. 5a and 5b]. A plurality of circumferential connecting struts interconnects at least some of the adjacent circumferential support structures. [FIGs. 5a and 5b]. The circumferential connecting struts extend between the apex portions of adjacent circumferential support structures. [FIGs. 5a and 5b]. At least some of the circumferential connecting struts have a width greater than a width of the longitudinal struts. [FIGs. 5a and 5b].

**(vi) Grounds of Rejection to be Reviewed on Appeal**

I. Whether the Examiner erred in rejecting claims 38 – 40, and 44 – 45 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,873,906 to Lau et al. (hereafter “Lau”).

II. Whether the Examiner erred in rejecting claims 38 – 40, and 44 – 45 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,132,460 to Thompson (hereafter “Thompson”).



**(vii) Arguments**

- I. Rejection of claims 38 – 40, and 44 – 45 under 35 U.S.C. § 102(e) as being anticipated by Lau.

**Claims 38, 40, and 44**

Lau fails to teach or suggest all the elements of claim 38. Claim 38 was copied from U.S. Patent Application Publication No. 2003/0055485 to Lee et al. (hereafter “Lee”) in order to provoke an interference. Because the Applicants have copied claim 38 from Lee in order to provoke an interference, and because Lee describes the claim terms, Applicants assert that the Examiner must adopt the definitions, meanings, and/or usages of the terms in claim 38 *as those terms are used in the Lee*.

The Examiner must adopt the definitions, meanings, and/or usages of the terms in claim 38 *as those terms are used in the Lee* because “[w]hen interpretation is required of a claim that is copied for interference purposes, the copied claim is viewed in the context of the patent from which it was copied.” *In re Spina*, 975 F.2d 854, 858, 24 USPQ2d 1142, 1145 (Fed. Cir. 1992), citing *DeGeorge v. Bernier*, 768 F.2d 1318, 1322, 226 USPQ 758, 761 (Fed.Cir. 1985) (if claim language is ambiguous “resort must be had to the specification of the patent from which the copied claim came”). “A claim is not interpreted one way in light of the specification in which it originally was granted, and another way in light of the specification into which it is copied as a proposed interference count.” *In re Spina*, 24 USPQ2d at 1145.

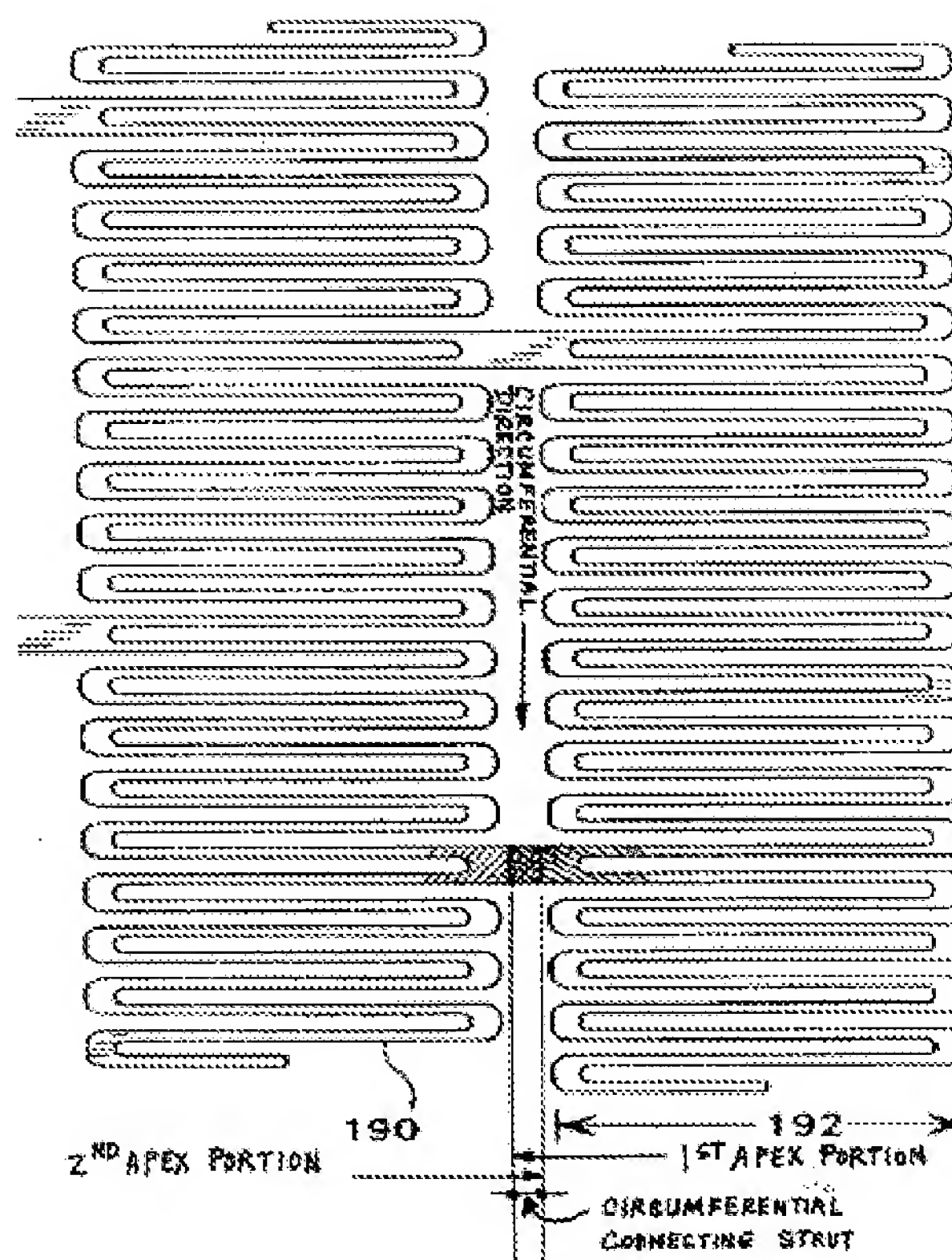
Furthermore, “USPTO personnel are to correlate each claim limitation to all portions of the disclosure that describe the claim limitation. This is to be done in all cases, regardless of whether the claimed invention is defined using means or step plus function language.

The correlation step will ensure that USPTO personnel correctly interpret each claim limitation.”

MPEP § 2106. And, “USPTO personnel must always remember to use the perspective of one of ordinary skill in the art. Claims and disclosures are not to be evaluated in a vacuum. If elements of an invention are well known in the art, the applicant does not have to provide a disclosure that describes those elements.” Id.

Therefore, because the Applicants have copied claim 38 from Lee in order to provoke an interference, and because Lee describes the claim terms, the Examiner must adopt the definitions, meanings, and/or usages of the terms in claim 38 *as those terms are used in the Lee*.

Regarding the rejection, the Examiner attempted to read claim 38 onto FIG. 13 of Lau, as shown below in the *annotated* version of FIG. 13 included in the Office Action:



However, the Examiner's interpretation is in conflict with the written description and the figures of Lee, from which claim 38 was copied.

In the Office Action, the Examiner states that, "there is no specific limitation defining various elements as recited in the claims, such as longitudinal strut (claim 38) or apex portion (claim 38) or a circumferential connecting strut (claim 38) in the claims. Therefore, it would be reasonable to interpret these claims in various ways that meet the limitations of the claims." Applicants respectfully assert that the claim terms *are* defined and, as such, the Examiner's interpretation is incorrect.

The claim terms are defined because there is no requirement in the MPEP that requires an Applicant to set forth *explicit* definitions in order to act as their own lexicographer. To the contrary, the MPEP states that

The specification should also be relied on for more than just explicit lexicography or clear disavowal of claim scope to determine the meaning of a claim term when applicant acts as his or her own lexicographer; the meaning of a particular claim term may be defined by implication, that is, according to the usage of the term in the context in the specification. MPEP § 2111.01, (Emphasis added)

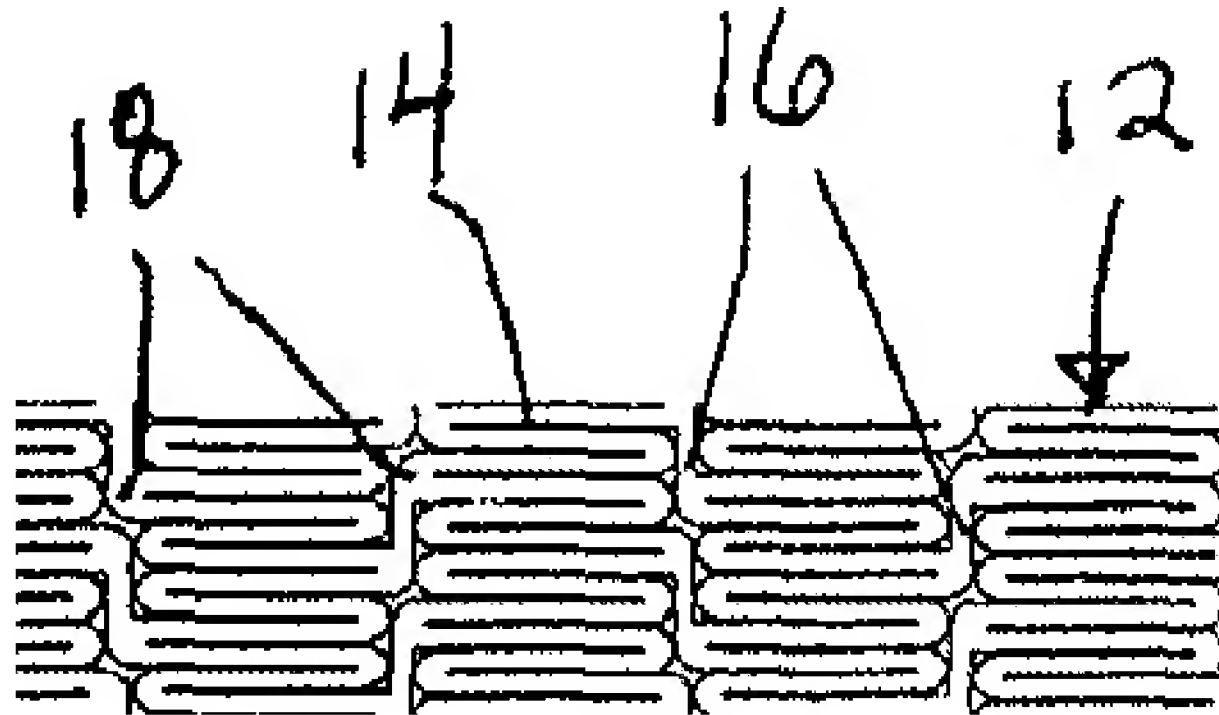
See *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005) (*en banc*); and *Vitronics Corp. v. Conceptronic Inc.*, 90 F.3d 1576, 1583, 39 USPQ2d 1573, 1577 (Fed. Cir. 1996).

In other words, the claim terms must be construed in light of the entire specification, *regardless of whether an explicit definition is provided*. To that end, it is entirely permissible for an Applicant such as Lee to *impliedly* define claim terms, such as by stating at paragraph [0022] that

Adjacent support structures 12 are joined by circumferential connecting struts 16 joining apex portions 18. The phrase "circumferential connecting struts" or "circumferential connecting members" will be understood to mean struts or members that interconnect adjacent circumferential support structures 12 and have a spacial component or vector that extends in a

circumferential direction about the stent 12. (Emphasis added)

and by *depicting* a circumferential connecting strut 16, as in the portion of FIG. 1 presented below:

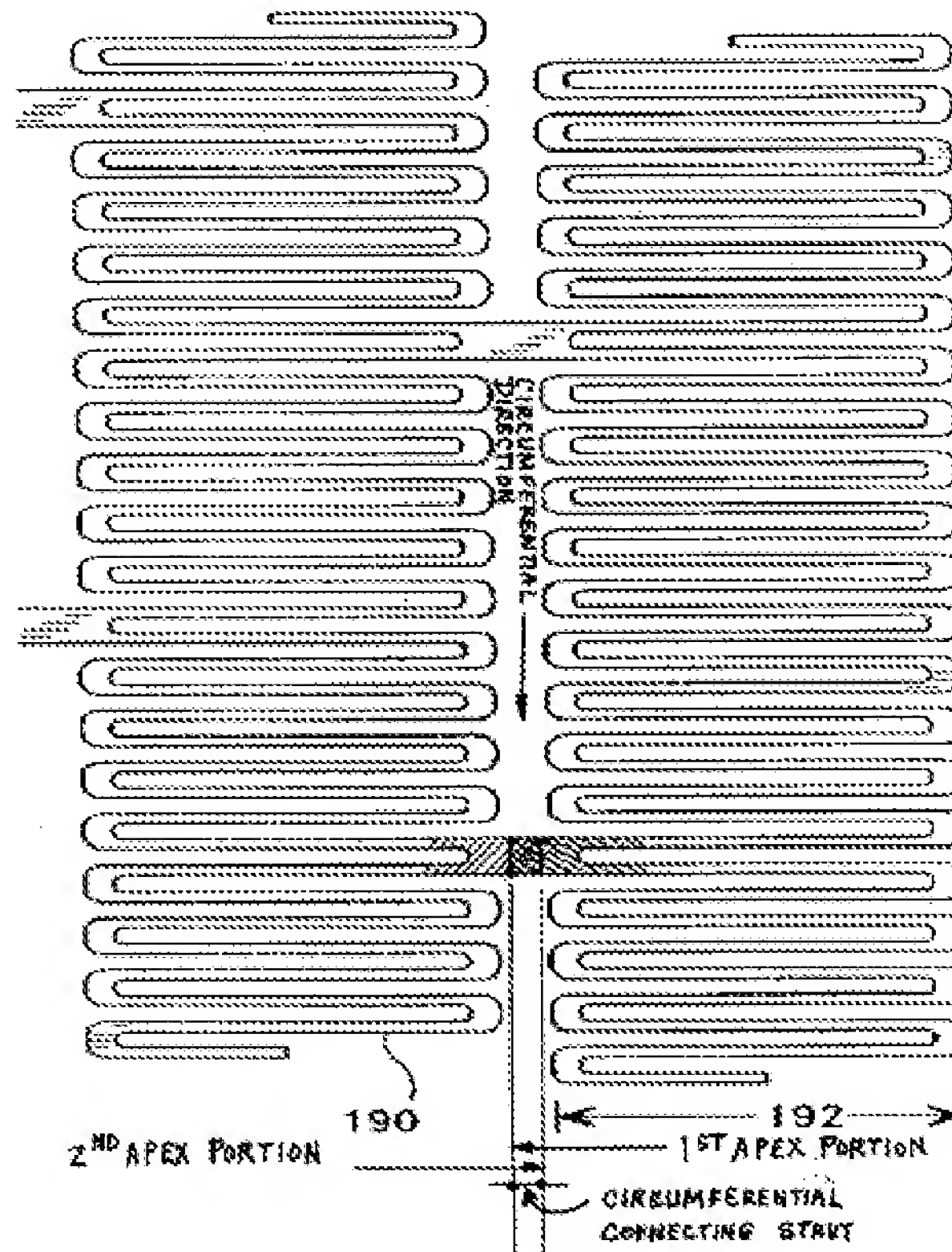


Comparing FIG. 13 of Lau, as *annotated* by the Examiner, with FIG. 1 of Lee and Lee's specification, it is clear the Examiner has taken a distinct, and unsupported, interpretation of the claim terms in claim 38. It is clear that the "circumferential connecting struts", as labeled by the Examiner in the annotated FIG. 13 of Lau supplied in the Office Action, do not "extend[] in a circumferential direction about the stent 12," as one of ordinary skill in the art would construe the phrase "circumferential connecting struts" to mean *in light of the Lee specification*. Rather, the Examiner has simply pointed to the width of a structure and asserted that the width is extension in a circumferential direction. Applicants respectfully submit that in light of the Lee specification as viewed by a person of ordinary skill in the art, this interpretation is unreasonable and therefore incorrect.

Furthermore, the interpretation put forth by the Examiner is also incorrect because it makes superfluous a claim limitation, contrary to the explicit recitations in the claim. Claim 38 recites "at least some of the apex portions of adjacent circumferential support structures being

configured to *longitudinally overlap one another* when in the un-deployed configuration.”

(Emphasis added). Claim 38 also recites “the circumferential connecting struts *extending between* the apex portions that overlap one another.” (Emphasis added). The *annotated* version of FIG. 13 of Lau that was included in the Office is shown again below:



According to the Examiner, the darker, cross-hatched region shown above in FIG. 13 of Lau is *both* the longitudinally overlapping apex portions and the circumferential connecting strut extending between the overlapping apex portions. This interpretation, however, is incorrect because it negates a claim term. Accepting for the sake of argument only the Examiner’s interpretation of the first and second apex portions and the longitudinally overlapping region, the purported circumferential connecting strut does not *extend between* the longitudinally overlapping apex portions, as in claim 38. Instead, at best, the purported circumferential



connecting strut is *overlaid* upon or *overlaps* the longitudinally overlapping portion. The purported circumferential connecting strut does not “*extend[] between* the apex portions that overlap one another,” as recited in claim 38. A person of ordinary skill in the art would understand that the phrase “the circumferential connecting struts *extending between* the apex portions that overlap one another” in claim 38 means that a first apex portion is joined to a second apex portion by a connecting strut. Under the Examiner’s interpretation, there is no reason to join the first apex portion with the second apex portion—these portions already are completely joined because of the overlap. Such an interpretation makes superfluous a recited claim element, and as such, is incorrect.

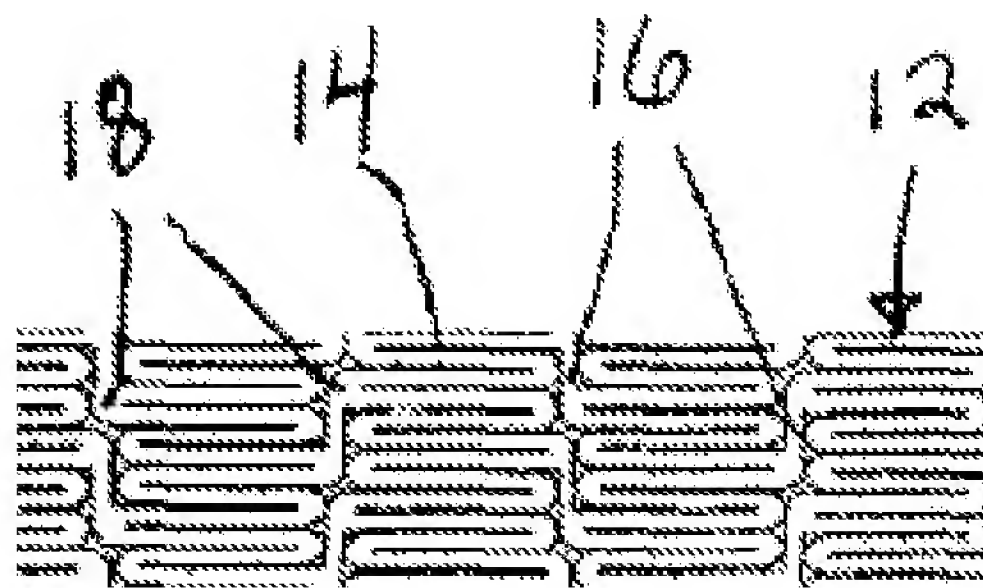
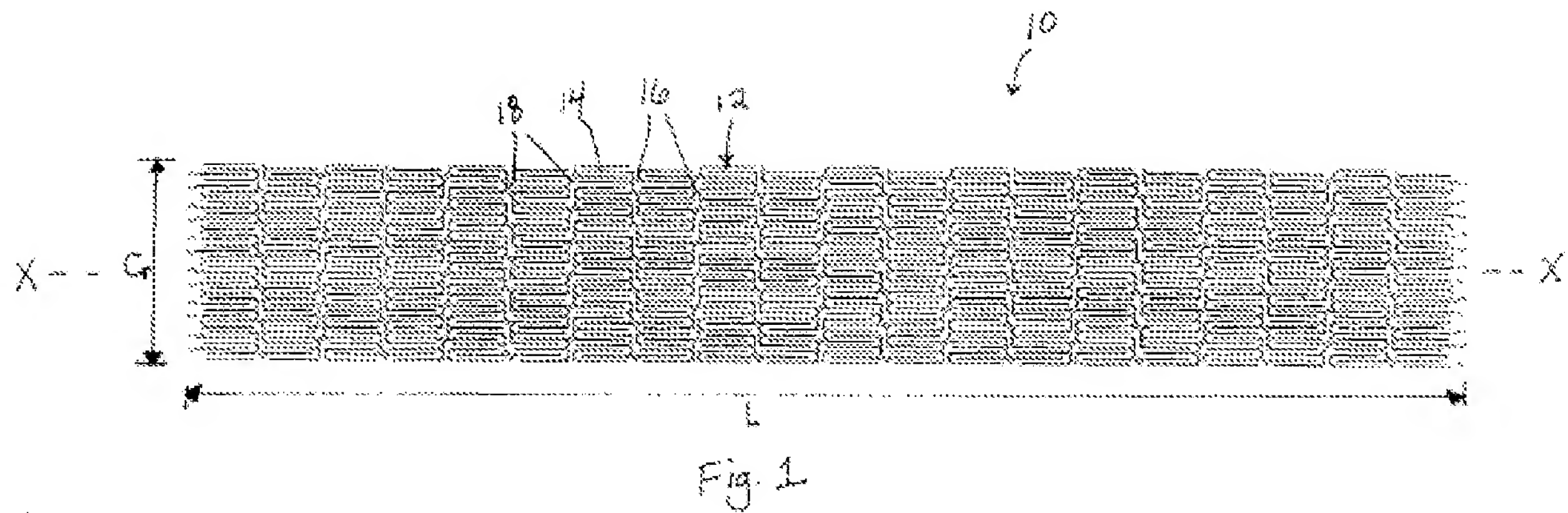
Claims 40 and 44 incorporate all the limitations of claim 38 and add additional limitations, making them patentable as well over Lau. Applicants traverse the rejections of claims 38, 40, and 44 and request that the rejection be withdrawn.

### **Claim 39**

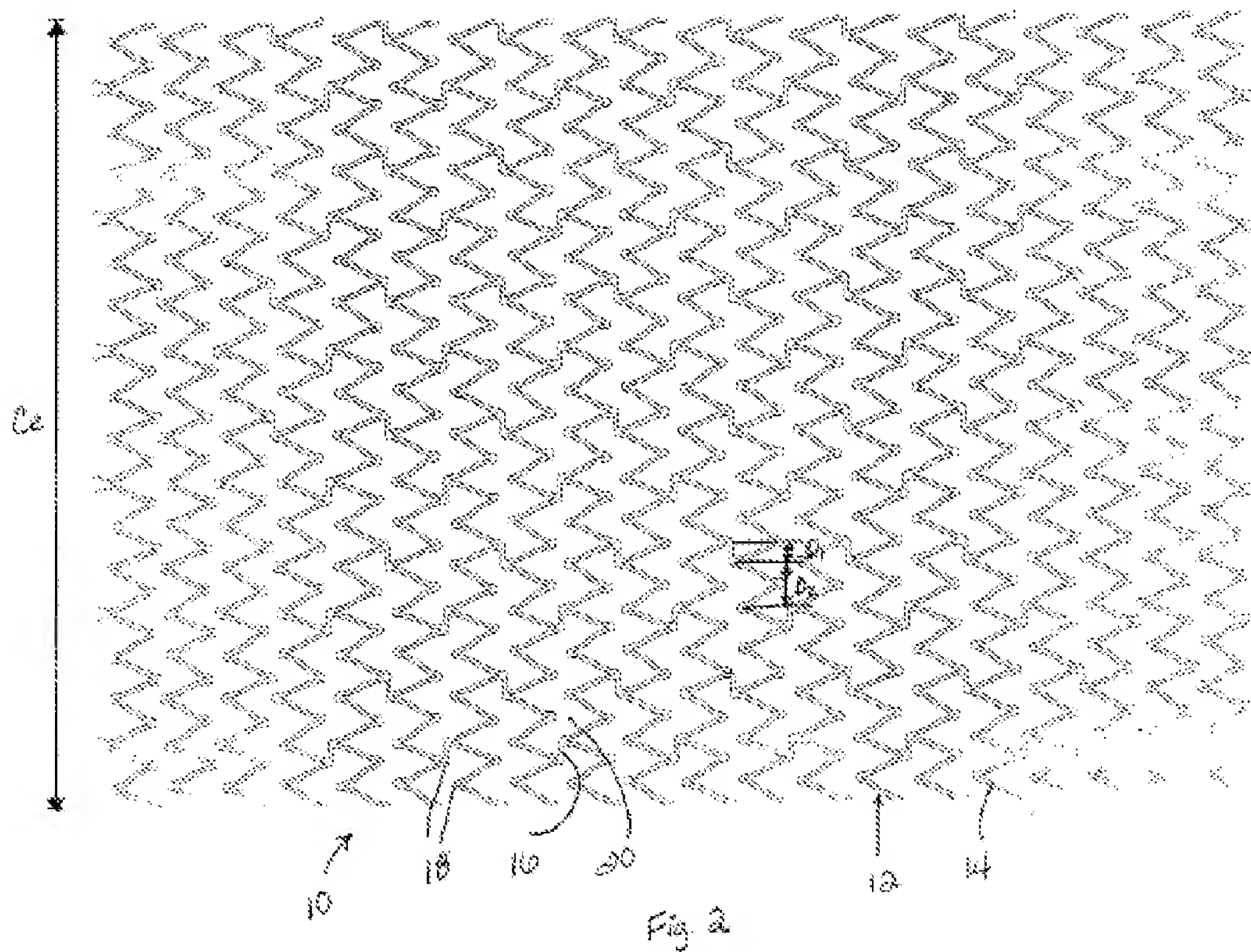
Lau fails to teach or suggest all the elements of claim 39. Claim 39 incorporates all the limitations of claim 38, and adds additional elements. Specifically, Lau fails to teach or suggest “wherein in the deployed orientation, adjacent circumferential support structures are offset such that the apex portions on one side of a support structure are positioned intermediate the apex portions on a facing side of an adjacent support structure,” as recited in claim 39.

As argued above, because the claims were copied from Lee to provoke an interference, Lee’s specification governs the interpretation of the claim terms. Lee states, “When the stent 10 [of FIG. 1] is in the deployed orientation, as shown in FIG. 2, the apex portions 18 on adjacent support structures 12 are offset.” (Paragraph [0032]) (Emphasis added). FIG. 1, and an

enlarged portion of FIG. 1, are shown immediately below:



And, Lee further states that “[i]n one embodiment, as shown in FIG. 2, the distance of offset  $D_1$  provided by the connection member 16 is about one-half the distance  $D_2$  provided between the apex portions 18...” (Paragraph [0033]) (Emphasis added). FIG. 2 is depicted below:



The “spacial component or vector that extends in a circumferential direction about the stent 12” is necessary to allow the apex portions 18 to be offset when the stent is in a deployed orientation. (Paragraph [0022]) (Emphasis added).

It is clear that under the claim interpretation proposed by the Office, the apex portions joined by the “circumferential connecting struts”, as labeled by the Examiner in the annotated FIG. 13 of Lau supplied in the Office Action, would *not* be offset once the stent is deployed, as in Lee. Rather, Applicants submit that the design of Lau would inhibit, if not altogether prohibit, the apex portions from being offset. Therefore, the interpretation supplied by the Examiner is incorrect because it would defeat the purpose of the circumferential connecting struts—creating offsets—expressly stated in the Lee specification. To that end, Lau is not anticipatory.



**Claim 45**

Lau fails to teach or suggest all the elements of claim 45. Lau fails to teach or suggest “circumferential connecting struts extending between the apex portions of adjacent circumferential support structures,” as recited in claim 45. As argued above, the Examiner must adopt the definitions, meanings, and usage of claim terms as they are defined in Lee, from which claim 45 was copied. And, as also argued above, Lau does not teach *circumferential* connecting struts, as that term is interpreted by a person of ordinary skill in the art in light of the Lee specification. To that end, Lau is not anticipatory.

II. Rejection of claims 38 – 40, and 44 – 45 under 35 U.S.C. § 102(e) as being anticipated by Thompson.

**Claims 38, 40, and 44**

Thompson fails to teach or suggest all the elements of claim 38. Claim 38 was copied from U.S. Patent Application Publication No. 2003/0055485 to Lee et al. (hereafter “Lee”) in order to provoke an interference. As discussed above, because the Applicants have copied claim 38 from Lee in order to provoke an interference, and because Lee describes the claim terms, the Office must adopt the definitions, meanings, and/or usages of the terms in claim 38 *as those terms are used in the Lee*.

The Office attempted to equate the limitations of claim 38 with FIG. 7 of Thompson, as shown below in the *annotated* version of FIG. 7 included in the Office Action:

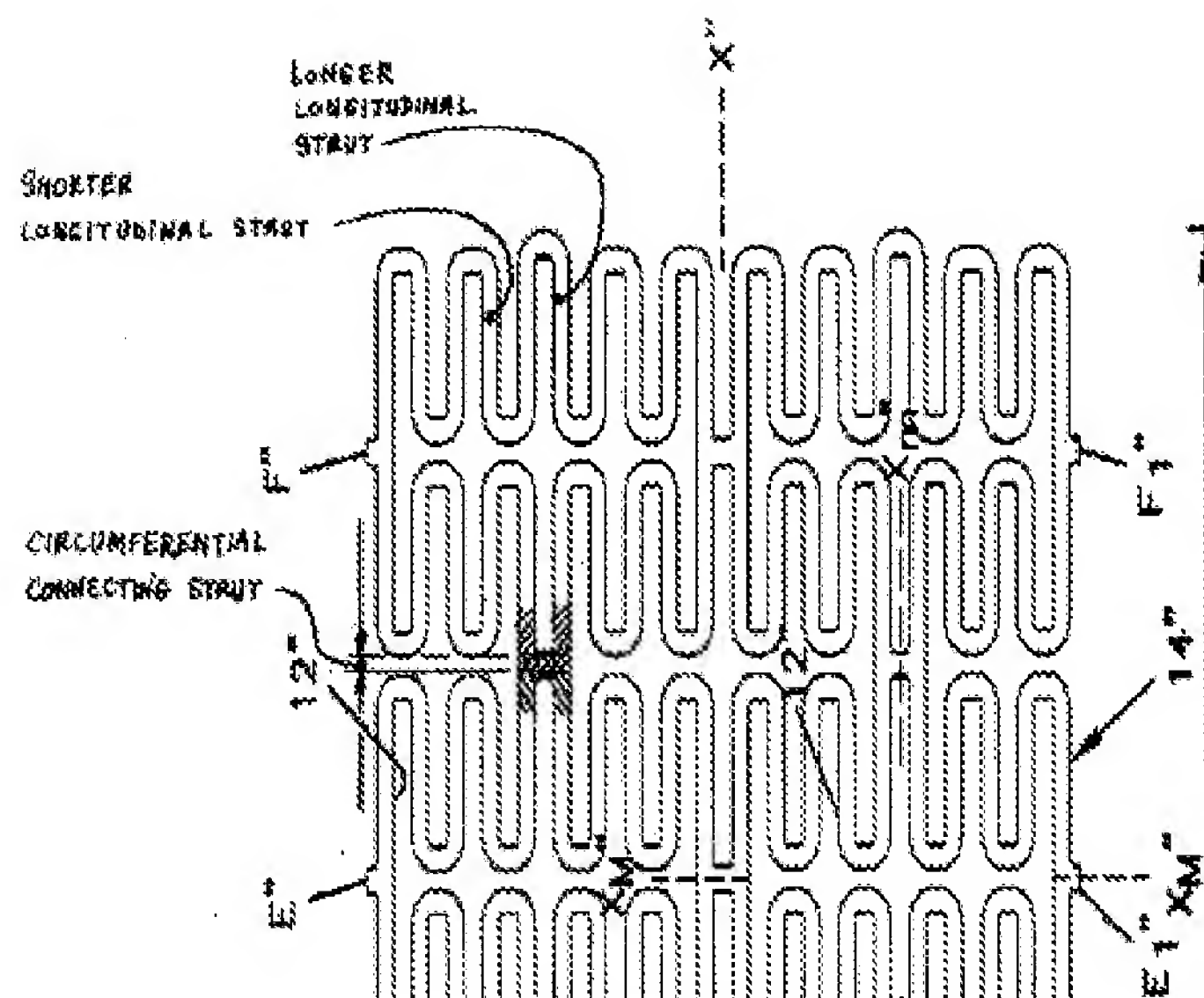


FIG. 7

It is clear that the “circumferential connecting struts”, as labeled by the Office in the annotated FIG. 7 of Thompson supplied in the Office Action, do not “extend[] in a circumferential direction about the stent 12,” as one of ordinary skill in the art would construe the phrase “circumferential connecting struts” to mean in light of the Lee specification. Rather, the Examiner has simply pointed to the width of a structure and asserted that the width is extension in a circumferential direction. Applicants respectfully submit that in light of the Lee specification as viewed by a person of ordinary skill in the art, this interpretation is unreasonable and therefore incorrect.

Furthermore, the interpretation put forth by the Examiner is also incorrect because it makes superfluous a claim limitation, contrary to the explicit recitations in the claim. Claim 38 recites “at least some of the apex portions of adjacent circumferential support structures being configured to *longitudinally overlap one another* when in the un-deployed configuration.” (Emphasis added). Claim 38 also recites “the circumferential connecting struts *extending between* the apex portions that overlap one another.” (Emphasis added).

According to the Examiner, the darker, cross-hatched region shown above in FIG. 7 of Thompson is *both* the longitudinally overlapping apex portions and the circumferential connecting strut extending between the overlapping apex portions. This interpretation, however, is incorrect because it negates a claim term. Accepting for the sake of argument only the Examiner's interpretation of the first and second apex portions and their longitudinally overlapping region, the purported circumferential connecting strut does not *extend between* the longitudinally overlapping apex portions, as in claim 38. Instead, at best, the purported circumferential connecting strut is *overlaid* upon or *overlaps* the longitudinally overlapping portion. The purported circumferential connecting strut does not “*extend[] between* the apex portions that overlap one another,” as recited in claim 38. A person of ordinary skill in the art would understand that the phrase “the circumferential connecting struts *extending between* the apex portions that overlap one another” in claim 38 means that a first apex portion is joined to a second apex portion by a connecting strut. Under the Examiner's interpretation, there is no reason to join the first apex portion with the second apex portion—these portions already are completely joined because of the overlap. Such an interpretation makes superfluous a recited claim element, and as such, is incorrect.

Claims 40 and 44 incorporate all the limitations of claim 38 and add additional limitations, making them patentable as well over Thompson. Applicants traverse the rejections of claims 38, 40, and 44 and request that the rejection be withdrawn.

### **Claim 39**

Thompson fails to teach or suggest all the elements of claim 39. Claim 39 incorporates all the limitations of claim 38, and adds additional elements. Specifically, Thompson

fails to teach or suggest “wherein in the deployed orientation, adjacent circumferential support structures are offset such that the apex portions on one side of a support structure are positioned intermediate the apex portions on a facing side of an adjacent support structure,” as recited in claim 39.

As argued above, because the claims were copied from Lee to provoke an interference, Lee’s specification governs the interpretation of the claim terms. Lee states, “When the stent 10 [of FIG. 1] is in the deployed orientation, as shown in FIG. 2, the apex portions 18 on adjacent support structures 12 are offset.” (Emphasis added)(Paragraph [0032]). FIGs. 1 and 2 were presented earlier. The “spacial component or vector that extends in a circumferential direction about the stent 12” is necessary to allow the apex portions 18 to be offset when the stent is in a deployed orientation. (Paragraph [0022]).

It is clear that under the claim interpretation proposed by the Office, the apex portions joined by the “circumferential connecting struts”, as labeled by the Office in the annotated FIG. 7 of Thompson supplied in the Office Action, would *not* be offset once the stent is deployed, as in Lee. Rather, Applicants submit that the design of Thompson would inhibit, if not altogether prohibit, the apex portions from being offset. Therefore, the interpretation supplied by the Examiner is incorrect because it would defeat the purpose of the circumferential connecting struts—creating offsets—expressly stated in the Lee specification. To that end, Thompson is not anticipatory.

#### **Claim 45**

Thompson fails to teach or suggest all the elements of claim 45. Thompson fails to teach or suggest “circumferential connecting struts extending between the apex portions of

adjacent circumferential support structures,” as recited in claim 45. As argued above, the Examiner must adopt the definitions, meanings, and usage of claim terms as they are defined in Lee, from which claim 45 was copied. And, as also argued above, Thompson does not teach *circumferential* connecting struts, as that term is interpreted by a person of ordinary skill in the art in light of the Lee specification. To that end, Thompson is not anticipatory.

**Conclusion**

For at least the reasons discussed above, the subject matter in claims 38 – 40, 44, and 45 is patentably distinct over the cited art. Consequently, reversal of the rejections is respectfully requested.

Respectfully submitted,

VIDAS, ARRETT & STEINKRAUS

Date: August 29, 2008

By: / James L. Shands /  
James L. Shands  
Registration No.: 54439

6640 Shady Oak Dr., Suite 400  
Eden Prairie, MN 55344-7834  
Telephone: (952) 563-3000  
Facsimile: (952) 563-3001

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**(viii) Claims Appendix**

38. A stent comprising: a stent body expandable between an un-deployed orientation and a deployed orientation, the stent body having a longitudinal axis extending between first and second open ends; the stent body having a plurality of adjacent circumferential support structures, the circumferential support structures being spaced-apart along the longitudinal axis; each support structure including longitudinal struts interconnected at apex portions, the longitudinal struts and apex portions defining an undulating pattern, at least some of the apex portions of adjacent circumferential support structures being configured to longitudinally overlap one another when in the un-deployed configuration; a plurality of circumferential connecting struts interconnecting at least some of the adjacent circumferential support structures, the circumferential connecting struts extending between the apex portions that overlap one another.

39. The stent of claim 38 wherein in the deployed orientation, adjacent circumferential support structures are offset such that the apex portions on one side of a support structure are positioned intermediate the apex portions on a facing side of an adjacent support structure.

40. The stent of claim 38 wherein at least some of the circumferential connecting struts have a width greater than a width of the longitudinal struts.

44. The stent of claim 38 wherein the undulating pattern defines a wavelength, and wherein the circumferential connecting members are at least one half the length of the wavelength.

45. A stent comprising: a stent body expandable between an un-deployed orientation and a



deployed orientation, the stent body having a longitudinal axis extending between first and second open ends; the stent body having a plurality of adjacent circumferential support structures, the circumferential support structures being spaced-apart along the longitudinal axis; each support structure including longitudinal struts interconnected at apex portions, the longitudinal struts and apex portions defining an undulating pattern; and a plurality of circumferential connecting struts interconnecting at least some of the adjacent circumferential support structures, the circumferential connecting struts extending between the apex portions of adjacent circumferential support structures, at least some of the circumferential connecting struts having a width greater than a width of the longitudinal struts.



**(ix) Evidence Appendix**

None.

**(x) Related Proceedings Appendix**

None.